NPDES Permit No. NH0100234

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

The City of Portsmouth

is authorized to discharge from the Wastewater Treatment Plant located at

Peirce Island
Portsmouth, New Hampshire

and from Combined Sewer Overflows located at

010A & 010B (Parrot Avenue), 012 (Marcy Street), 013 (Deer Street)

to receiving water(s) named

Piscataqua River and South Mill Pond (to the Piscataqua River)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the first day of the calendar month following 60 days after signature.

This permit and the authorization to discharge shall expires at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on January 18, 1985.

This permit consists of 15 pages in Part I including effluent limitations, monitoring requirements; Whole Effluent Toxicity Protocol in Attachment A (7 pages); 1 page in Attachment B; Sludge Compliance Guidance (48 pages); and 25 pages in Part II including General Conditions and Definitions.

Signed this 10th day of APRIL, 2007

/S/ SIGNATURE ON FILE

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (EPA)
Boston, Massachusetts

NPDES Permit No. NH0100234

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 001 (treated wastewater effluent) to the Piscataqua River. Such discharge shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that is representative of the discharge.

Effluent Characteristic	Discharge Limitations			Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow[1], MGD	Report	---	Report	Continuous	Recorder
BOD_5, Effluent[2], mg/l (lbs/day)	30 (1201)	45 (1801)	50 (2002)	2/Week	24-Hour Composite
BOD_5, Influent[2], mg/l	Report	---	---	2/Month	24-Hour Composite
TSS, Effluent[2], mg/l (lbs/day)	30 (1201)	45 (1801)	50 (2002)	2/Week	24-Hour Composite
TSS, Influent[2], mg/l	Report	---	---	2/Month	24-Hour Composite
pH Range[3], Standard Units	6.0 - 8.0			1/Day	Grab
Total Residual Chlorine[4, 5], mg/l	0.33	---	0.57	Continuous	Recorder
Fecal Coliform[3, 4, 6], %	---	---	Report[6]	1/Day	Grab
Fecal Coliform[3, 4, 6], MPN/100 ml	14	---	---	1/Day	Grab
Enterococci Bacteria[4, 7], Colonies/100 ml	Report	---	Report	2/Week	Grab

See pages 4 and 5 for explanation of superscripts

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Part I.A.1, Continued

Effluent Characteristic		Monitoring Requirements	
	Maximum Daily	Measurement Frequency	Sample Type
Whole Effluent Toxicity[8, 9], LC_{50}, % Effluent	100	1/Quarter	24-Hour Composite
Ammonia Nitrogen as Nitrogen[10]; mg/l	Report	1/Quarter	24-Hour Composite
Total Recoverable Aluminum[10]; mg/l	Report	1/Quarter	24-Hour Composite
Total Recoverable Cadmium[10]; mg/l	Report	1/Quarter	24-Hour Composite
Total Recoverable Chromium[10]; mg/l	Report	1/Quarter	24-Hour Composite
~~Total Recoverable Copper~~[10]; mg/l	Report	1/Quarter	24-Hour Composite
~~Total Recoverable Lead~~[10]; mg/l	Report	1/Quarter	24-Hour Composite
~~Total Recoverable Nickel~~[10]; mg/l	Report	1/Quarter	24-Hour Composite
~~Total Recoverable Zinc~~[10]; mg/l	Report	1/Quarter	24-Hour Composite

See pages 4, 5 and 6 for explanation of superscripts

PART I.

EXPLANATION OF SUPERSCRIPTS TO PART I.A.1:

[1]The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

[2]The influent concentrations of both BOD_5 and TSS shall be monitored at a minimum of two times per month (2/month) for outfall 001 using a 24-Hour composite sample. The influent 24-Hour composite sample should be initiated prior to the 24-Hour composite sample required for effluent monitoring. The effluent concentrations of both BOD_5 and TSS shall be monitored at a minimum of two times per week (2/week) for outfall 001 using a 24-Hour composite sample. The start of the effluent 24-Hour composite sample shall take into account the resident time of the treatment works. A monthly average shall be calculated for both influent and effluent and reported for each.

[3]State certification requirement.

[4]Samples for Fecal Coliform bacteria, Enterococci bacteria and Total Residual Chlorine shall be collected concurrently.

[5] Total Residual Chlorine shall be measured using any one of the following three methods listed in 40 Code of Federal Regulations (CFR) Part 136:

a. Amperometric direct.
b. DPD–FAS.
c. Spectrophotometric, DPD.

[6]Fecal Coliform shall be tested using test method 9221 C and E found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent Edition(s), as approved in 40 CFR Part 136.

The Average Monthly value for Fecal Coliform shall be determined by calculating the geometric mean using the daily sample results. Not more than 10 percent of the collected samples shall exceed a Most Probable Number (MPN) of 43 per 100 ml for a 5-tube decimal dilution test. Furthermore, all Fecal Coliform data collected must be submitted with the monthly Discharge Monitoring Reports (DMRs).

The permittee is required to report two (2) statistics each month. One is the geometric mean Fecal Coliform value expressed in terms of "MPN per 100 ml" (reported as average monthly), and the other is the "percentage" of collected samples that exceeds a MPN of 43 per 100 milliliters for the 5-tube decimal dilution test referenced immediately above (reported as maximum daily). The latter statistic will be used to judge compliance with

that part of the limit that reads "Not more than 10 percent of the collected samples shall exceed a MPN of 43 per 100 milliliters for a 5-tube decimal dilution test." referenced above.

[7]Enterococci shall be tested using an EPA approved test method (see 40 C.F.R. Part 136, Table 1A).

[8]The permittee shall conduct acute survival toxicity testing on effluent samples following the protocol in Attachment A (dated September1996). The two species for these tests are *Menidia beryllina* and *Mysidopsis bahia*. Toxicity test samples shall be collected and tests completed four (4) times per year during the calendar quarters ending March 31st, June 30th, September 30th and December 31st. Toxicity test results are to be reported by the 15th day of the month following the end of that quarter tested.

[9]"LC50" is defined as the concentration of wastewater that causes mortality to 50 percent (%) of the test organisms. The "100 %" is defined as a sample which is composed of 100 % effluent (See A.1. on page 3 of Part I and Attachment A of Part I). Therefore, a 100 % limit means that a sample of 100 % effluent (no dilution) shall cause no greater than a 50 % mortality in that effluent sample.

[10]For each Whole Effluent Toxicity test the permittee shall report on the appropriate DMR, the concentrations of the Ammonia Nitrogen as Nitrogen, and Total Recoverable Aluminum, Cadmium, Chromium, Copper, Lead, Nickel and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the MLs shown in Attachment A on page A-8, or as amended. Also the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report. This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of these toxicity tests indicate that the discharge causes an exceedance of any water-quality criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 CFR §122.62(a)(2).

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

2. The discharge shall not cause or contribute to a violation of the water quality standards of the receiving water.

3. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS when discharging thru outfall 001. The percent removal shall be based on a comparison of average monthly influent concentration versus average monthly effluent concentration.

4. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring, and would render it unsuitable for its designated uses.

5. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

6. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to both EPA and the NHDES-WD of the following:

   a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category (See 40 CFR Part 122, Appendix A as amended) discharging process water; and

   b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

   c. For purposes of this paragraph, adequate notice shall include information on:

      (1) The quantity and quality of effluent introduced into the POTW, and;

      (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

7. Limitations for Industrial Users

   a. A user may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference with the operation or performance of the treatment works. The terms "user", "pass through" and "interference" are defined in 40 CFR Section 403.3.

   b. The permittee shall submit to EPA-New England and NHDES-WD the name of any Industrial User (IU) subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended) **who commences discharge to the POTW after the effective date of this permit.** This reporting requirement also applies to any other IU that discharges an average of 25,000 gallons per day or more of process wastewater into the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater);

contributes a process wastewater which makes up five (5) percent or more of the average dry-weather hydraulic or organic capacity of the POTW; or is designated as such by the Control Authority as defined in 40 CFR §403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR §403.8(f)(6)].

c. In the event that the permittee receives reports (baseline monitoring reports, 90-day compliance reports, periodic reports on continued compliance, etc.) from industrial users subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N, (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended) the permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA-New England and NHDES-WD.

8. When the effluent discharged for a period of 3 consecutive months exceeds 80 percent of the 4.8 MGD design flow (3.84 MGD), the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.

B. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal & state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state (Env-Ws 800) or federal (40 CFR Part 503) requirements.

3. The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices.

   a. Land application - the use of sewage sludge to condition or fertilize the soil.

   b. Surface disposal - the placement of sewage sludge in a sludge only landfill.

   c. Placement of sludge in a municipal solid waste landfill (See 40 CFR Section 503.4).

   d. Sewage sludge incineration in a sludge only incinerator.

4. The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions do not apply to facilities which do not dispose of sewage sludge during the life of the permit, but rather treat the sludge (lagoons, reed beds), or are otherwise excluded under 40 CFR Section 503.6.

5. The permittee shall use and comply with the attached Sludge Compliance Guidance document to determine appropriate conditions. Appropriate conditions contain the following elements.

   General requirements
   Pollutant limitations
   Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
   Management practices
   Record keeping
   Monitoring
   Reporting

   Depending upon the quality of material produced by a facility all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction for the permittee's chosen sewage sludge use or disposal practices at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

less than 290	1/Year
290 to less than 1,500	1/Quarter
1,500 to less than 15,000	6/Year
15,000 plus	1/Month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR Section 503.8.

8. The permittee shall submit an annual report containing the information specified in the attached Sludge Compliance Guidance document. Reports are **due annually by February 19th**. Reports shall be submitted to both addresses (EPA-New England and NHDES-WD) contained in the reporting section of the permit.

C. COMBINED SEWER OVERFLOW CONDITIONS

1. Effluent Limitations

a. During wet-weather periods, the permittee is authorized to discharge storm water/wastewater from combined sewer overflows (CSOs) to receiving waters (see Attachment B), subject to the following effluent limitations.

(1) The discharges may not cause or contribute to violations of Federal or State water-quality standards.

(2) The discharges shall receive treatment at a level providing Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants. The EPA-New England has made a Best Professional Judgement (BPJ) determination that BPT, BCT and BAT for CSOs include the implementation of the nine Minimum Technology-Based Limitations (MTBLs) specified below otherwise know as Nine Minimum Controls (NMC):

(a) Proper operation and regular maintenance programs for the sewer system and the combined sewer overflow points;

(b) Maximum use of the collection system for storage;

(c) Review and modification of industrial pretreatment program requirements to assure CSO impacts are minimized;

(d) Maximization of flow to the POTW for treatment;

(e) Prohibition of dry-weather overflows from CSOs;

(f) Control of solid and floatable materials in CSO discharges;

(g) Pollution prevention programs that focus on contaminant reduction activities;

(h) Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and

(i) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

(3) The Permittee must implement the activities identified in its nine minimum controls documentation titled "Report on Nine Minimum

Control Measures" dated May 1995, submitted on May 8, 1995, and any amendments thereto.

2. Unauthorized Discharges

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from those outfalls listed in **Attachment B** of this permit. Discharges of wastewater from any other point source not described elsewhere in this permit are not authorized under this permit. Dry-weather overflows are prohibited (NMC at **Part C.1.a.(2)(e)**). All dry-weather sanitary and/or industrial discharges from any CSO must be reported to EPA-New England and the State within 24 hours in accordance with the reporting requirements for plant bypass (See Paragraph D.1.e of Part II of this permit).

3. Records and Reporting

The permittee shall quantify and record all CSO discharges from outfalls listed in **Attachment B** of this permit. Quantification may be performed either through direct measurement or through an estimation technique. When an estimation technique is used, such as an updated version of the SWMM model already developed for the City's Long-Term Control Plan (LTCP), the permittee shall make reasonable efforts (e.g., gaging, measurements, visual observations, tell-tale monitorings, etc.) to verify the validity of the estimation technique. If the SWMM model is used, it must be updated to reflect current conditions in the City's collection and treatment systems used for CSO abatement. The following information must be recorded for each combined sewer outfall for each discharge event:

- Estimated date of discharge;
- Estimated duration (hours) of discharge;
- Estimated volume (gallons) of discharge; and
- Precipitation data from the City of Portsmouth gage (daily (24-hour) intervals and one-hour intervals). Cumulative precipitation per discharge event shall be calculated.

The permittee shall maintain all records of discharges for at least five (5) years after the effective date of this permit.

Annually, no later than January 15th, the permittee shall submit a written certification to EPA-New England and the State which states that all the discharges from combined sewer outfalls were recorded, and all other appropriate reports and records maintained for the previous calendar year. A summary of modifications (if any) to the approved NMC program which have been evaluated, and a description of those which will be implemented during the upcoming year shall be included with the annual certification.

4. Reopener/Additional CSO Control Measures

This permit may be modified or reissued upon the completion of a long-term CSO control plan. Such modification may include performance standards for the selected controls, post construction water quality assessment program, monitoring for compliance with water quality standards, and a reopener clause to be used in the event that the selected CSO controls fail to meet water quality standards. Section 301(b)(1)(C) requires that a permit include limits that may be necessary to protect Federal and State water quality standards.

D. SPECIAL CONDITIONS

1. Whole Effluent Toxicity Test Frequency Adjustment

The permittee may submit a written request to the EPA requesting a reduction in the frequency (to not less than twice per year) of the toxicity testing requirements contained in Part I.A.1 of this permit, after completion of a minimum of four (4) successive toxicity tests as required in Part I.A.1. All toxicity tests must be valid tests and must demonstrate compliance with the whole effluent toxicity limits as specified in Part I.A.1 of this permit. Until written notice is received by certified mail from the EPA indicating that a reduction in the Whole Effluent Testing requirement has been allowed, the permittee is required to continue testing at the frequency specified in the permit.

The permittee shall also provide a copy of any such request for a frequency adjustment to the Conservation Law Foundation, 27 North Main Street, Concord, NH 03301-4930.

EPA reserves the right to return to the original toxicity testing schedule if subsequent testing results warrant it. Notification of any such requirement will be provided to the permittee by certified mail.

2. pH Limit Adjustment

The permittee may submit a written request to the EPA requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units. The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

E. MONITORING AND REPORTING CONDITIONS

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period.

Signed and Dated original DMRs and all other reports or notifications required herein or in **Part II**, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Duplicate signed copies of all reports required above shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095

Any verbal reports, if required in **Parts I** and/or **II** of this permit, shall be made to both EPA-New England and to NHDES-WD.

F. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

   a. The pH range of 6.0-8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR §133.102(c).

   b. Pursuant to State Law NH RSA 485-A:13 and the New Hampshire Code of Administrative Rules, Env-Wq 703.07(a) and Env-Ws 904.10 the following submissions shall be made to the NHDES-WD by a municipality proposing to

accept into its POTW (including sewers and interceptors):

(1) An "Application for Sewer Connection Permit" for any proposal to construct or modify any of the following:

(a) Any extension of a collector or interceptor, whether public or private, regardless of flow;

(b) Any wastewater connection or other discharge in excess of 5,000 gpd;

(c) Any wastewater connection or other discharge to a wastewater treatment facility operating in excess of 80 percent design flow capacity for 3 consecutive months;

(d) Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity; and

(e) Any sewage pumping station greater than 50 gpm or serving more than one building.

(2) An "Industrial Wastewater Discharge Request Application" for new or increased loadings of industrial waste, in accordance with Env-Ws 904.10.

c. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).

d. Any modifications of the Permittee's Sewer Use Ordinance, including local limitations on pollutant concentrations, shall be submitted to the NHDES-WD for approval prior to adoption by the permittee.

e. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer use ordinance if it has been revised since any previously approved submittal.

f. Within 120 days of the effective date of this permit, the permittee shall submit to NHDES-WD a current list of all industries discharging industrial waste to the municipal wastewater treatment plant. As a minimum, the list shall indicate the

name and address of each industry, along with the following information: telephone number, contact person, products manufactured, industrial processes used, existing level of pretreatment, and list of existing industrial discharge permits with effective dates.

2. This NPDES Discharge Permit is issued by the EPA-New England under Federal and State law. Upon final issuance by the EPA-New England, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

   Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

3. If chlorine is used for disinfection, a recorder which shall continuously record the chlorine residual prior to dechlorination shall be provided. The minimum, maximum and average daily residual chlorine values, measured prior to dechlorination, shall be submitted with monthly Discharge Monitoring Reports. Charts from the recorder, showing the continuous chlorine residual shall be maintained by the permittee for a period no less than (5) years.

4. The Portsmouth Wastewater Treatment Facility is responsible for immediately notifying the New Hampshire Department of Environmental Services, Watershed Management Bureau, Shellfish Section of possible high bacteria/virus loading events from the facility or its sewage collection infrastructure. Such events include:

   a. Any lapse or interruption of normal operation of the WWTF disinfection system, or other event that results in discharge of sewage from the WWTF or sewer infrastructure (pump stations, sewer lines, manholes, combined sewer overflows, etc.) that has not undergone full treatment as specified in the NPDES permit, or

   b. Daily flows in excess of the facility's average daily design flow of 4.8 MGD, or

   c. Daily post-disinfection effluent sample result of 43 fecal coliform/100ml or greater.

   Notification shall also be made for instances where NPDES-required bacteria sampling is not completed, or where the results of such sampling are invalid.

   Notification to the NHDES Shellfish Program shall be made using the program's 24-hour pager. Upon initial notification of a possible high bacteria/virus loading event, NHDES Shellfish Program staff will determine the most suitable interval for continued notification and updates on an event-by-event basis.

G. REOPENER CLAUSE

1. This permit may be modified in the event that a Total Maximum Daily Load (TMDL) is developed for the receiving water resulting in the need for new permit limits for this discharge.

MARINE ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Mysid Shrimp (Mysidopsis bahia) definitive 48 hour test.**
- **Inland Silverside (Menidia beryllina) definitive 48 hour test.**

Acute toxicity data shall be reported as outlined in Section VIII.

II. METHODS

Methods to follow are those recommended by EPA in:

Weber, C.I. et al. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. August 1993, EPA/600/4-90/027F.

Any exceptions are stated herein.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for the chemical and physical analyses. The remaining sample shall be dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual oxidants (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium

thiosulfate to reduce 1.0 mg/L chlorine. A thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) should also be run.

All samples held overnight shall be refrigerated at 4°C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected at a point away from the discharge which is free from toxicity or other sources of contamination. Avoid collecting near areas of obvious road or agricultural runoff, storm sewers or other point source discharges. An additional control (0% effluent) of a standard laboratory water of known quality shall also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a conductivity, salinity, total suspended solids, and pH similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S).** Written requests for use of an alternative dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency-New England
JFK Federal Building (CAA)
Boston, MA 02203

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA New England requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Mysid and Menidia toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS FOR THE MYSID, MYSIDOPSIS BAHIA 48 HOUR TEST[1]

1.	Test type	Static, non-renewal
2.	Salinity	25ppt ± 10 percent for all dilutions by adding dry ocean salts
3.	Temperature (°C) 20°C ± 1°C or 25°C ± 1°C	
4.	Light quality Ambient laboratory illumination	
5.	Photoperiod 16 hour light, 8 hour dark	
6.	Test chamber size	250 ml
7.	Test solution volume	200 ml
8.	Age of test organisms	1-5 days
9.	No. Mysids per test chamber	10
10.	No. of replicate test chambers per treatment	4
11.	Total no. Mysids per test concentration	40
12.	Feeding regime	Light feeding using concentrated Artemia nauplii while holding prior to initiating the test
13.	Aeration[2]	None

14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	$\geq$ 0.5
16. Number of dilutions[3]	5 plus a control. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding
18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

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Footnotes:

1. Adapted from EPA/600/4-90/027F.

2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.

3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND RECOMMENDED TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST[1]

1.	Test Type	Static, non-renewal
2.	Salinity	25 ppt ± 2 ppt by adding dry ocean salts
3.	Temperature	20°C ± 1°C or 25°C ± 1°C
4.	Light Quality	Ambient laboratory illumination
5.	Photoperiod	16 hr light, 8 hr dark
6.	Size of test vessel	250 mL (minimum)
7.	Volume of test solution	200 mL/replicate (minimum)
8.	Age of fish	9-14 days; 24 hr age range
9.	No. fish per chamber	10 (not to exceed loading limits)
10.	No. of replicate test vessels per treatment	4
11.	total no. organisms per concentration	40
12.	Feeding regime	Light feeding using concentrated Artemia nauplii while holding prior to initiating the test
13.	Aeration[2]	None
14.	Dilution water	Natural seawater, or deionized water mixed with artificial sea salts.
15.	Dilution factor	≥ 0.5

16. Number of dilutions[3]	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.
18. Test acceptability	90% or greater survival of test organisms in control solution.
19. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters.

Footnotes:

1. Adapted from EPA/600/4-90/027F.

2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.

3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

Parameter	Effluent	Diluent	Minimum Quantification Level (mg/L)
pH	x	x	---
Salinity	x	x	PPT(o/oo)
Total Residual Oxidants*1	x	x	0.05
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x		0.001
Cr	x		0.005
Pb	x		0.005
Cu	x		0.0025
Zn	x		0.0025
Ni	x		0.004
Al	x		0.02

Superscript:

*1 Total Residual Oxidants

Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

-Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
-Method 4500-CL G DPD Photometric Method.

or use USEPA Manual of Methods Analysis of Water or Wastes, Method 330.5.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

See flow chart in Figure 6 on page 77 of EPA 600/4-90/027F for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 94 of EPA 600/4-90/027F.

VIII. TOXICITY TEST REPORTING

The following must be reported:

- Description of sample collection procedures, site description;
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody; and
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicity test data must be included.
- Raw data and bench sheets.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Provide a description of dechlorination procedures (as applicable).

- Any other observations or test conditions affecting test outcome.
- Statistical tests used to calculate endpoints.

ATTACHMENT B

CSO OUTFALLS UNDER THE JURISDICTION OF THE CITY OF PORTSMOUTH

DISCHARGE SERIAL NO.	LOCATION	TYPE OF DISCHARGE	COMPOSITION OF DISCHARGE	RECEIVING WATER
010A	Parrot Avenue	Combined Overflow	Untreated Sanitary/Storm Water	South Mill Pond to Piscataqua River
010B	Parrot Avenue	Combined Overflow	Untreated Sanitary/Storm Water	South Mill Pond to Piscataqua River
012	Marcy Street	Combined Overflow	Untreated Sanitary/Storm Water	Piscataqua River
013	Deer Street	Combined Overflow	Untreated Sanitary/Storm Water	Piscataqua River

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NO.: NH0100234

PUBLIC NOTICE START AND END DATES:

CONTENTS:

NAME AND MAILING ADDRESS OF APPLICANT:

City of Portsmouth
700 Islington Street
Portsmouth, NH 03801

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Peirce Island Wastewater Treatment Facility, and
Combined Sewer Overflows (See Attachments A and B) located in

Portsmouth, NH 03801

RECEIVING WATERS: Piscataqua River and
South Mill Pond (to Piscataqua River)
Hydrologic Basin Code: 01060003

RECEIVING WATER CLASSIFICATION: B

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has applied to the U.S. Environmental Protection Agency for reissuance of its NPDES permit to discharge into the designated receiving waters pursuant to a CWA Section 301(h) variance (i.e., a waiver from secondary treatment standards, see 40 CFR Part 125, Subpart G). EPA intends to deny this variance request and instead issue a permit requiring secondary treatment. This tentative denial is discussed in more detail the in the accompanying "Tentative 301(h) Denial Decision" document.

The Peirce Island Wastewater Treatment Facility (note that the correct spelling is "*Peirce*") is engaged in the collection and treatment of municipal and industrial wastewater through both a separate and combined sewer system. Primary treated effluent is currently discharged through a single port diffuser located in the Piscataqua River. The draft permit requires that the City improve the quality of effluent such that it meets secondary treatment standards.

As many as four Combined Sewer Overflows (CSO) may discharge untreated effluent and/or storm water during certain times (see Attachment A for a description of permitted outfalls and Attachment B for their locations).

Sludge generated by the plant is sent off site to a municipal solid waste landfill for disposal (Turnkey Recycling Landfill in Rochester, New Hampshire).

II. Description of Discharge

The facility currently operates as a "chemically enhanced" or "advanced" primary treatment facility. Wastewater is first screened by a 1 inch mechanical bar screen. Influent then flows to two aerated grit chambers at the entrance to the treatment facility where a ferric chloride/polymer blend is added. An anionic polymer is added ahead of the pipe to the primary clarifier distribution box. Wastewater then flows into the two primary clarifiers where sedimentation occurs. Next, the wastewater flows into two chlorine contact tanks for disinfection with sodium hypochlorite. The effluent is dechlorinated with sodium bisulfite at the dechlorination tank (pH can also be controlled here with the addition of sodium hydroxide) before it is discharged to the Piscataqua River through the single port outfall. A facility flow diagram is shown in Attachment C.

The draft permit conditions and limits are based on a combination of the secondary treatment regulations found at 40 CFR Part 133 and the requirements of the State of New Hampshire's water-quality standards. The City will need to improve the quality of its treatment in order to meet the draft permit limits. The City will need to either build a new secondary treatment facility or upgrade the existing facility at Peirce Island in order to fully comply with these new requirements. The implementation of the draft permit conditions is discussed in more detail in Section VI.C of this Fact Sheet (see below).

The treatment plant currently discharges through a 0.6 meter diameter, single port outfall located at the mouth of the Piscataqua River at Latitude 43^0 04' 24 "N, Longitude 70^0 44' 34"W. The outfall is located at a water depth of approximately 60 feet, during mean low water. The location and physical properties of this outfall have not changed since last permit issuance. An inspection of the outfall completed on August 2, 2001 showed that the outfall is in good condition. The existing dilution is 43.5 to 1.

III. Limitations and Conditions

Effluent limitations, monitoring requirements, and any implementation schedule are found in PART I of the draft NPDES permit. The basis for each limit and condition is discussed in Section VI of this Fact Sheet.

IV. Statutory and Regulatory Authority

A. General Statutory and Regulatory Background

Congress enacted the Clean Water Act (CWA or Act), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specified permitting sections of the Act, one of which is Section 402. See CWA §§ 301(a), 402(a). Section 402 establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System ("NPDES"). Under this section of the Act, EPA may "issue a permit for the discharge of any pollutant, or combination of pollutants" in accordance with certain conditions. See CWA § 402(a). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. See CWA § 402(a)(1)-(2).

Section 301 of the CWA provides for two types of effluent limitations to be included in NPDES permits: "technology-based" limitations and "water quality-based" limitations. See CWA §§ 301, 303, 304(b); 40 CFR Parts 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant-reducing technology available and economically achievable for the type of facility being permitted. See CWA § 301(b). As a class, POTWs must meet performance-based requirements based on available wastewater treatment technology. CWA § 301(b)(1)(B). The performance level for POTWs is referred to as "secondary treatment." Secondary treatment is comprised of technology-based requirements expressed in terms of BOD_5, TSS and pH. 40 C.F.R. Part 133.

Water quality-based effluent limits, on the other hand, are designed to ensure that state water quality standards are met regardless of the decision made with respect to technology and economics in establishing technology-based limitations. In particular, Section 301(b)(1)(C) requires achievement of "any more stringent limitation, including those necessary to meet water

quality standards...established pursuant to any State law or regulation...." See 40 C.F.R. §§ 122.4(d), 122.44(d)(1) (providing that a permit must contain effluent limits as necessary to protect state water quality standards, "including State narrative criteria for water quality") (emphasis added) and 122.44(d)(5) (in part providing that a permit incorporate any more stringent limits required by Section 301(b)(1)(C) of the CWA).

The CWA requires that states develop water quality standards for all water bodies within the state. CWA § 303. These standards have three parts: (1) one or more "designated uses" for each water body or water body segment in the state; (2) water quality "criteria," consisting of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) an antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA § 303(c)(2)(A); 40 C.F.R. § 131.12. The limits and conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain water quality standards.

The applicable New Hampshire water quality standards can be found in Surface Water Quality Regulations, Chapter Env-Ws 1700 et seq. See generally, Title 50, Water Management And Protection, Chapter 485A, Water Pollution and Waste Disposal Section 485-A. Hereinafter, New Hampshire's Surface Water Quality Regulations are referred to as the NH Standards.

Receiving stream requirements are established according to numerical and narrative standards adopted under state law for each stream classification. When using chemical-specific numeric criteria from the state's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentrations. Acute aquatic life criteria are generally implemented through maximum daily limits and chronic aquatic life criteria are generally implemented through average monthly limits. Where a State has not established a numeric water quality criterion for a specific chemical pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use"; on a "case-by-case basis" using CWA Section 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an "indicator parameter." 40 CFR § 122.44(d)(1)(vi)(A-C).

All statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired. When technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. See 40 CFR § 125.3(a)(1). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by an NPDES permit. The regulations governing EPA's NPDES permit program are generally found in 40 CFR Parts

122, 124, 125 and 136.

B. Development of Water Quality-based Limits

The permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality standard, including narrative water quality criteria. See 40 CFR §122.44(d)(1). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion.

Reasonable Potential

In determining reasonable potential, EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from permit application, monthly discharge monitoring reports (DMRs), and State and Federal water quality reports; (3) sensitivity of the species to toxicity testing; (4) statistical approach outlined in *Technical Support Document for Water Quality-based Toxics Controls,* March 1991, EPA/505/2-90-001 in Section 3; and, where appropriate, (5) dilution of the effluent in the receiving water. In accordance with New Hampshire water quality standards (RSA 485-A:8,VI, Env-Ws 1705.02) available dilution for rivers and streams is based on a known or estimated value of the lowest average flow which occurs for seven (7) consecutive days with a recurrence interval of once in ten (10) years (7Q10) for aquatic life and human health criteria for non-carcinogens, or the long-term harmonic mean flow for human health (carcinogens only) in the receiving water at the point just upstream of the outfall. Furthermore, 10 percent (%) of the receiving water's assimilative capacity is held in reserve for future needs in accordance with New Hampshire's Surface Water Quality Regulations Env-Ws 1705.01. Additionally, Env-Ws 1705 specifies that the low flow condition used to calculate permit limits for discharges to tidal waters will be the condition that result in a dilution that is exceeded 99 percent of the time.

C. Anti-Backsliding

Section 402(o) of the CWA generally provides that the effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the previous permit. EPA has also promulgated anti-backsliding regulations, which are found at 40 CFR § 122.44(l). Unless applicable anti-backsliding requirements are met, the limits and conditions in the reissued permit must be at least as stringent as those in the previous permit.

D. State Certification

Section 401(a)(1) of the CWA requires all NPDES permit applicants to obtain a certification from the appropriate state agency stating that the permit will comply with all applicable federal effluent limitations and state water quality standards. See CWA § 401(a)(1). The regulatory provisions pertaining to state certification provide that EPA may not issue a permit until a

certification is granted or waived by the state in which the discharge originates. 40 C.F.R. § 124.53(a). The regulations further provide that, "when certification is required....no final permit shall be issued...unless the final permit incorporates the requirements specified in the certification under § 124.53(e)." 40 CFR. § 124.55(a)(2). Section 124.53(e) in turn provides that the State certification shall include "any conditions more stringent than those in the draft permit which the State finds necessary" to assure compliance with, among other things, state water quality standards, see 40 CFR. § 124.53(e)(2), and shall also include "[a] statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law, including water quality standards," see 40 C.F.R.§ 124.53(e)(3).

However, when EPA reasonably believes that a state water quality standard requires a more stringent permit limitation than that reflected in a state certification, it has an independent duty under CWA § 301(b)(1)(C) to include more stringent permit limitations. See 40 C.F.R. §§ 122.44(d)(1) and (5). It should be noted that under CWA § 401, EPA's duty to defer to considerations of state law is intended to prevent EPA from relaxing any requirements, limitations or conditions imposed by state law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 CFR § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." Id. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR § 122.4 (d) and 40 CFR § 122.44(d).

E. Section 301(h) of the Clean Water Act

Section 301(h) was added to the CWA in 1977 allowing EPA, with concurrence of the State, to issue an NPDES permit that modifies the secondary treatment requirements of Section 301(b)(1)(B) for discharges into marine waters by POTWs. Applicants seeking a 301(h) waiver must demonstrate the proposed discharge complies with the Section 301(h) criteria as found at 40 CFR Part 125, Subpart G. These implementing regulations were first issued in 1979. Subsequent amendments extended the deadline for filing an application to December 29, 1982 and modified the applicant eligibility requirements.

The Water Quality Act (WQA) of 1987 further amended Section 301(h). These changes necessitated the revising of portions of existing regulations, and simplifying and revising the application requirements contained in Appendices A and B of Subpart G. The final amendments to the existing regulations became effective on September 8, 1994. These regulations contain certain prohibitions in 40 CFR Section 125.59, such as a permit issuance that results in a conflict with compliance with the Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451 *et seq.* The special permit conditions for inclusion in any permit issued under Section 301(h) are established in 40 CFR Part 125 Subpart G, Section 125.68.

Importantly, the 1987 amendments to Section 301(h) of the Clean Water Act included the following prohibition:

No permit issued under this subsection shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish and wildlife, or allow recreation in and on the waters or which exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish and wildlife or recreational activities or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant's current or proposed discharge.

V. Description of Receiving Water

The Piscataqua River is classified as a Class B waterway by the New Hampshire Department of Environmental Services, Water Division (NHDES-WD). Class B waters shall be of the second highest quality, shall have no objectionable physical characteristics, and shall contain a dissolved oxygen content of at least 75 percent saturation on a daily average and at least 5 mg/l on an instantaneous basis. Designated uses are for the protection and propagation of aquatic life and wildlife, swimming and other recreational purposes, and for public water supplies.

The portion of the Piscataqua River into which the treatment plant discharges to falls under the definition of "saline estuarine waters" as that term is defined at 40 CFR § 125.58.

The State of New Hampshire's final 2004 list of "threatened or impaired waters" includes a listing for the Piscataqua River. This list, prepared pursuant to CWA section 303(d) identifies the "lower" Piscataqua River (classified as an estuary) as not supporting primary contact recreation as a result of Enterococcus bacteria; not supporting fish consumption as a result of polychlorinated biphenyls (PCBs) and mercury; not supporting shellfishing because of dioxin, PCBs, and mercury. The Peirce Island treatment plant discharges into the assessment unit designated as the "lower" Piscataqua River. The section 303(d) lists the assessment unit known as the "upper" Piscataqua River (also classified as an estuary) as not supporting fish consumption as a result of polychlorinated biphenyls (PCBs) and mercury; and not supporting shellfishing because of dioxin, PCBs, and mercury. Therefore, the New Hampshire side of the entire Piscataqua River, designated as estuarine, is listed as not supporting its designated uses because of at least four impairments.

VI. Permit Basis and Explanation of Effluent Limitation Derivation

A. Background

The City of Portsmouth is currently discharging under the authority of an expired NPDES permit (effective date of January 18, 1985, expired January 1990), which granted the City a variance from secondary treatment requirements pursuant to Section 301(h) of the CWA (a "301(h) waiver"). Therefore, the expired permit contains appropriate terms and conditions

applicable to that variance. The issuance of the 1985 permit served to finalize EPA's December 5, 1983, 301(h) determination. The December 5, 1983, 301(h) determination was based upon an evaluation and recommendation by the EPA 301(h) task force.

The expired permit included specific requirements of the Section 301(h) variance including the following average monthly effluent limitations: flow of 4.5 mgd, five-day Biochemical Oxygen Demand (BOD_5) of 150 mg/L and 5630 lbs/day, and Total Suspended Solids (TSS) of 125 mg/L and 4691 lbs/day. These effluent limitations (the permit specified an effective date of July 1, 1988) were based on improvements to the existing wastewater treatment plant on Peirce Island. Prior to this date, interim limits were based on the treatment level that the facility was capable of achieving without improvements. The expired permit authorized the discharge from a number of combined sewer overflows (CSOs) with certain restrictions and requirements.

The City, the State of New Hampshire, and EPA entered into a judicial Consent Decree in November 1990. The Consent Decree required the City to upgrade the wastewater treatment facility, to monitor the Combined Sewer Overflow (CSO) outfalls, and to prepare a CSO Facilities Plan. The upgrades to the treatment facility were completed on February 25, 1992. The upgrades to the facility included the following improvements: aerated grit chamber, two primary clarifiers, and chlorination and dechlorination systems. The pumping peak flow capacity to the treatment plant was increased to 22.0 mgd. CSO monitoring was initiated in April 1990, and the CSO Facilities Plan was submitted to EPA and the State in November 1999.

B. Permitting Renewal History

The existing permit expired in January 1990. In December 1989, EPA sent the City a letter indicating that the City's renewal application appeared to be complete. Therefore, the existing expired permit has been administratively extended. On April 23, 1993, the City submitted a final 301(h) waiver application. Information and data concerning the water quality and benthic community near the outfall were provided in a report prepared for EPA in September 1994 (Piscataqua River, New Hampshire Water Quality and Benthic Community Study, Metcalf & Eddy, 1994).

In order to receive a waiver, an applicant must demonstrate that it will discharge effluent that has received at least primary or equivalent treatment. Primary or equivalent treatment is defined as treatment adequate to remove at least 30 percent of the BOD and suspended solids (monthly average). EPA's review of Portsmouth's permit application and 301(h) variance request indicated that the WWTF was experiencing problems consistently meeting 30 percent biochemcial oxygen demand (BOD_5) removal efficiency.

On August 5, 1998, EPA sent a letter to the City expressing EPA's concern over the failure of the POTW to meet the minimum 301(h) waiver 30 percent BOD_5 removal requirements. EPA's August 5, 1998, letter required the City to outline steps it would take to ensure that its treatment works would obtain at least 30 percent BOD_5 removal.

In response to EPA's August 5, 1998 letter, the facility implemented a pilot project to determine if chemical enhancement would ensure that the POTW would achieve at least 30 percent BOD_5 removal. The results of the pilot project indicated that operating the POTW as a "Chemically Enhanced Primary Treatment Facility" allowed the facility to consistently achieve at least 30 percent BOD_5 removal. Therefore, the City began operating the plant as a Chemically Enhanced Primary Treatment Facility. The facility has consistently exceeded the 30 percent BOD_5 removal requirements since it began full scale chemical enhancement (it has averaged approximately 44 percent BOD_5 removal since July 2002, see Attachment D).

On November 14, 2000, EPA sent the City a letter expressing concern over the plant's high chlorine residual levels. The November 14, 2000, letter required the City to submit information pertaining to its chlorine use, effluent bacteria levels, its ability to meet both chlorine and bacteria limits, and whole effluent toxicity testing. The City responded in a letter dated November 27, 2000. The response included plans to upgrade the facility to operate as a Chemically Enhanced Primary Treatment System and plans to improve the disinfection system to meet New Hampshire's fecal coliform discharge requirements. The City stated that these projects would address the problems of high chlorine residual and high fecal coliform levels. The November 27, 2000, letter from the City also included a memorandum from Underwood Engineers, Inc. (the City's consultants) which responded to certain questions raised in EPA's November 14, 2000, letter. The memorandum indicated that no information was available on Whole Effluent Toxicity (WET).

On January 19, 2001, EPA sent another information request to the City requiring WET testing and a re-evaluation of the dilution factor. The City responded on February 16, 2001. The City's response indicated that the effluent would not meet toxicity limits as outlined in Region I's toxicity policy for municipal permits. The City partially evaluated the dilution factor. The City indicated that EPA's January 19, 2001, letter did not allow enough time for a more complete re-evaluation of the dilution factor.

On June 26, 2001, EPA sent the City a request for more information. EPA's letter required that the City provide the following: a schedule for completion of the ongoing modification to the WWTF; a Toxicity Reduction Evaluation; a priority pollutant scan of the effluent; a biological monitoring program; re-submittal of a complete application pursuant to 40 CFR Part 125, Subpart G (the 301(h) waiver requirements); an inspection and the reporting of the condition of the plant's outfall pipe; and monthly status reports. The City has submitted all of the information requested by EPA in this information request. The monthly status reports continue to be submitted by the City.

On December 18, 2003, Region I provided a response to a letter from Underwood Engineers, Inc. (submitted on behalf of the City) dated January 31, 2003. In its January 31, 2003, letter the City's engineer requested that Region I allow less stringent acute toxicity limits for the Peirce Island plant than otherwise would be required under Region I's whole effluent toxicity (WET)

strategy for municipal permits. Region I stated in its response that site-specific toxicity limits could be developed if the City first conducted a site-specific mixing zone analysis. Region I also stated in its letter that it believed more dilution would be required than is currently provided by the facility's current outfall configuration to meet water quality standards for toxicity (and total residual chlorine) at the site. Region I's belief was based on the most recent acute WET data and ongoing chlorine monitoring results submitted by the City as part of the a CWA section 308 request.

In May 2004, the City submitted an 301(h) renewal application based on an "improved discharge."

In February 2005, EPA issued a draft permit which, among other things, tentatively approved the City's 301(h) waiver application from secondary standards. EPA held a public hearing on the draft permit and 301(h) tentative decision on May 9, 2005. The public comment period ended shortly thereafter. EPA received numerous comments on the draft permit.

As a result of the comments received on the February 2005 draft permit, EPA is now withdrawing the February 2005 draft permit and 301(h) Tentative Approval Decision. EPA is instead issuing a 301(h) Tentative Denial Decision and a draft permit based on, among other things, secondary treatment standards found at 40 CFR Part 133.

C. Effluent Limitations

As discussed above, EPA is issuing a draft permit based on a combination of secondary treatment and water-quality requirements. The derivation and basis of the draft permit's effluent limits are discussed below.

EPA has determined that the City of Portsmouth's current discharge is ineligible for a waiver from secondary treatment standards because it discharges into a saline estuary that does not meet all water-quality standards and therefore is prohibited from qualifying for a 301(h) waiver based on the 1987 Water Quality Act amendments (see the accompanying 301(h) Tentative Denial Decision document).

EPA is imposing permit limits based on secondary treatment standards (see 40 CFR Part 133) and WQS applied to the current outfall. The City has stated that the plant's monthly average design flow is 4.8 mgd. This is a slight increase in the stated value for design flow used in the existing permit (4.5 mgd,). The City indicated that this slightly higher design value is based on the upgrade design by Whitman and Howard (consultants to the City) completed in 1993. EPA views this as new information not available at the time of the existing permit's issuance and, therefore, pursuant to 40 CFR 122.(l)(2)(i)(B)(1), EPA is using the new average monthly design flow of 4.8 to derive the BOD_5 and TSS mass loadings for this permit. These calculations are shown below.

1. Flow

Although flow is not considered a "pollutant", this draft permit requires that the permittee report both the average monthly and maximum daily flow values.

2. Settleable Solids

An effluent limitation for Settleable Solids (SS) was included as a state certification requirement in the existing permit. However, the NHDES-WD requests omitting this requirement because the SS test results are uncertain and the TSS test provides the necessary data (TSS is a more appropriate measure of the solids content of the effluent). Therefore, an effluent limit for SS is not included in the draft permit.

3. Total Residual Chlorine

Total Residual Chlorine (TRC) was limited by a narrative statement in the existing permit (i.e., there were no numerical limits). The narrative requirements were based upon a state certification requirement. TRC limits in the draft permit are based on available dilution and the State's acute and chronic water-quality standards. These limits are derived are as follows:

Effluent Limit = (Dilution Factor) x (Water-Quality Standard)

Average Monthly Limit = 43.5 x 7.5 µg/L = 326 µg/L = 0.33 mg/L

Maximum Daily Limit = 43.5 x 13 µg/L = 565.6 µg/L = 0.57 mg/L

4. BOD_5 and TSS

Secondary treatment standards require: (1) at least an 85 percent removal of TSS and BOD, and; (2) concentration based limits for TSS and BOD of 30 mg/l average monthly, 45 mg/l weekly average. The State of New Hampshire requires a 50 mg/l daily maximum limit for secondary treatment. This is included as a state certification requirement. Additionally, mass (pounds per day) are included in the draft permit. These mass limits are based on the above concentrations, a conversion factor, and the flow through the plant. See below:

Effluent Limit = (allowable concentration) x (plant design flow) x (conversion factor)

Average Monthly Limit = (30 mg/l) x (4.8 MGD) x 8.34 = 1201 pounds/day

Average Weekly Limit = (45 mg/l) x (4.8 MGD) x 8.34 = 1801 pounds/day

Maximum Daily Limit = (50 mg/l) x (4.8 MGD) x 8.34 = 2002 pounds/day

5. Bacteria

The limit for Fecal Coliform bacteria is new to this draft permit and replaces the Total Coliform bacteria limit in the existing permit. This limit is based on state water quality requirements.

New Hampshire State statute N.H. RSA 485-A:8,V. specifies that the bacteria standard shall be "... as recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration." This standard applies to facilities which discharge into tidal waters used for growing or taking of shellfish for human consumption, and therefore applies to Portsmouth's WWTF. The recommended criteria for Fecal Coliform Bacteria is 14 colonies per 100 milliliters of Fecal Coliform Bacteria and includes a condition that "... not more than 10 percent of the collected samples to exceed a Most Probable Number (MPN) of 43 per 100 milliliters for a 5-tube decimal dilution test." The NHDES-WD has determined that the Fecal Coliform value of 14 colonies per 100 milliliters applies to NPDES permits as an "average monthly" limit and that permits should also include a maximum daily "report only" requirement. The report only requirement is needed to monitor the variation in Fecal data to properly assess compliance with the "average monthly" limit (i.e., ensure not more than 10 percent of the samples exceed the MPN). The average monthly bacteria limit is determined by calculating the geometric mean of the daily sample values.

The NHDES-WD has determined how the Fecal Coliform criteria shall be applied in NPDES permits for conformance with N.H. RSA 485-A:8,V. and has designated the average monthly "limit" and the maximum daily "report-only" requirement as state certification requirements.

N.H. RSA 485-A:8,V. also requires enterococci bacteria limits for discharges to "tidal waters utilized for swimming purposes." However, EPA is not requiring a numerical enterococci bacteria limit in this permit. Rather, EPA is imposing a "report only" enterococci requirement. EPA believes this is appropriate in this case due to: 1) the site specific circumstances of this discharge (i.e., discharge to middle of the Piscataqua River which has a high level of maritime traffic and is not ordinarily used for recreational swimming); and, 2) the lack of site specific data needed in order to access the reasonable potential from the plant to contribute to a bacteria violation of the receiving water, which is on the State's list of impaired waters for enterococci bacteria. Collecting bacteria data from the treatment plant's effluent will allow EPA and NH DES to evaluate potential enterococci impacts on the receiving water. NH DES agrees with the approach in this situation because the DES believes that the enterococci bacteria standards found at N.H. RSA 485-A:8,V are intended for tidal waters with higher swimming use than is the case with the Piscataqua River in the vicinity of Peirce Island and that future bacteria standards

may be developed for such classes of tidal waters.

6. pH

The existing permit's pH limit was based on a state certification requirement. The permitted range was from 6.5 to 8.0 standard units (su). In a letter to the NH DES dated July 15, 2002, the City requested a pH adjustment. The City submitted a study which showed that the pH in the Piscataqua River, after discharge of the facility's effluent at a pH range of between 6.0 and 8.0 su, would not result in the Piscataqua River pH falling outside the 6.5 - 8.0 su range. The NH DES responded to Portsmouth's request in a letter dated July 19, 2002. In this letter, the NH DES stated that it supported an adjustment of the pH range in the permit.

Therefore, EPA is adjusting the permitted pH range in the draft permit to between 6.0 and 8.0 su.

7. Whole Effluent Toxicity

EPA's **Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991**, recommends using an "integrated strategy" containing both a pollutant (chemical) specific approach and a whole effluent (biological) toxicity approach to control toxic pollutants from entering the nation's waterways from permitted discharges. EPA-New England adopted this "integrated strategy" on July 1, 1991, for use in permit development and issuance. Both approaches are designed to protect aquatic life and human health.

Pollutant specific approaches to control toxics, such as those in the Gold Book and State regulations, address individual chemicals, whereas, a whole effluent toxicity (WET) approach to toxics control evaluates interactions between pollutants, thus rendering an "overall" or "aggregate" toxicity assessment of the effluent. Furthermore, WET measures the "additivity" and/or "antagonistic" effects of individual chemical pollutants while pollutant specific derived permit limits do not, thus the need for both approaches. In addition, the presence of an unknown toxic pollutant can be discovered and addressed through the process of WET testing.

New Hampshire law states that, "all surface waters shall be free from toxic substances or chemical constituents in concentrations or combination that injure or are inimical to plants, animals, humans, or aquatic life;...." (N.H. RSA 485-A:8, VI and the N.H. Code of Administrative Rules, PART Env-Ws 1703.21(a)(1)). The federal NPDES regulations at 40 CFR §122.44(d)(1)(v) require whole effluent toxicity limits in a permit when a discharge has a "reasonable potential" to cause or contribute to an excursion above the State's narrative criterion for toxicity.

EPA-New England's current policy requires toxicity testing in all municipal permits with the type of toxicity test (acute and/or chronic) and effluent limitation based on a range of available dilution. Region I's policy requires that secondary treatment facilities with a dilution factor between 20 and 100 meet an acute toxicity limit of LC_{50} of 100 percent effluent (no chronic). Therefore, the draft permit requires that Portsmouth meet this toxicity limit.

As a Special Condition of this permit, the frequency of the toxicity testing requirements may be reduced (via a certified letter from the EPA). A reduction may be allowed if, after four consecutive WET tests, the permittee has demonstrated compliance with the Whole Effluent Toxicity permit limits specified in Part I.A.1 of the permit. The permittee must make any such request in writing to the EPA. The EPA will review the test results and any other pertinent information to make a decision on the request. The frequency of toxicity testing may not be reduced to less than once per year.

8. Combined Sewer Overflows (CSOs)

Four CSOs remain active (outfalls 010A and 010B, 011, and 013). A description of these overflows are found in Attachment A and their locations are indicated on the map in Attachment B. The following discussion explains the final EPA National CSO Policy, published on April 19, 1994 in the Federal Register (FR) (59 FR 18688). Specific requirements in the draft permit include: dry-weather overflow prohibition, nine minimum controls, and documentation of the implementation of these nine minimum controls, and compliance with water quality standards.

A. General: CSOs are discharges from a combined storm water and wastewater sewer system into a receiving water without first going to the headworks of a publicly owned treatment works (POTWs). CSO occur when the flow in the combined sewer system exceeds interceptor or regulator capacity. CSO are distinguished from bypasses which are "intentional diversions of waste streams from any portion of a treatment facility" (40 CFR §122.41(m)).

Flows in combined sewers can be classified into two categories: wet-weather flow and dry-weather flow. Wet-weather flow is a combination of domestic and industrial sewage, infiltration from groundwater, and storm water flow including snow melt. Dry-weather flow is the flow in a combined sewer that results from domestic sewage, groundwater infiltration and industrial wastes, with no contribution from storm water runoff or storm water induced infiltration.

Dry-weather overflows from CSOs are illegal. They must be reported immediately to EPA and eliminated as expeditiously as possible.

The objectives of the National CSO Control Policy are to: (1) Ensure that if the

CSO discharges occur, they are only as a result of wet weather, (2) bring all wet weather CSO discharge points into compliance with the technology-based requirements of the CWA and applicable Federal and State water-quality standards, and (3) minimize water quality, aquatic biota, and human health impacts from wet-weather flows.

B. Effluent Standards: CSO are point sources subject to both water-quality based and technology-based NPDES permit requirements. However, they are not subject to secondary treatment regulations.

Section 301(b)(1)(C) of the CWA of 1977 mandates compliance with Federal and State Water Quality Standards by July 1, 1977. Technology-based permit limits must be established for BPT, BCT and BAT based on BPJ in accordance with Section 301(b) and Section 402(a) of the WQA Amendments of 1987.

C. Conditions for Discharge: The draft permit prohibits dry-weather discharges from CSO outfalls. During wet-weather, the discharges must not cause violation of Federal and State Water Quality Standards. Dry-weather discharges must be reported immediately to EPA and the NHDES-WD. Wet weather discharges must be monitored and reported as specified in the permit.

D. Nine Minimum Controls (NMC): The permittee must comply with BPJ derived BCT/BAT controls, which at a minimum include the following: (1) proper operation and maintenance of the sewer system and outfalls; (2) maximum use of the collection systems for storage; (3) review pretreatment programs to assure CSO impacts are minimized; (4) maximization of flow to the POTW for treatment; (5) prohibition of dry-weather overflows; (6) control of solid and floatable materials in the discharge; (7) pollution prevention programs which focus on contaminant reduction activities; (8) public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and (9) monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

E. Documentation: The Permittee must implement the activities identified in its nine minimum controls documentation titled "Report on Nine Minimum Control Measures" dated May 1995, submitted to EPA on May 8, 1995, and any amendments thereto. A requirement to submit a summary of modifications (if any) to the approved NMC program which have been evaluated, and a description of those which will be implemented during the upcoming year is included in the permit as an annual certification requirement.

F. Reopener/Additional CSO Control Measures: This permit may be modified or reissued upon the completion of a long-term CSO control plan. Such modification

may include performance standards for the selected controls, a post construction water quality assessment program, monitoring for compliance with water quality standards, and a reopener clause to be used in the event that the selected CSO controls fail to meet water quality standards. Section 301(b)(1)(C) requires that a permit include limits that may be necessary to protect Federal and State water quality standards.

9. Effective Date and Implementation

The draft permit specifies that the limits and conditions are effective 60 days after signature.

EPA intends to develop a schedule for the construction of secondary treatment facility(s). EPA plans to work with the City and the United States Department of Justice to modify the existing judicial Consent Decree that the City of Portsmouth entered into with the United States to include an implementation schedule. The modified Consent Decree will contain the key milestones and implementation dates. EPA also expects to set interim limits and conditions that the City will need to meet until the secondary treatment facility is operational.

10. Reoperner Clause

The State has requested that a "reopener" clause be inserted in the permit in the event that a Total Maximum Daily Load (TMDL) is developed for the receiving water resulting in the need for new permit limits for this discharge. Such a reopener has been included in the draft permit.

D. Sludge

Section 405(d) of the CWA requires that EPA develop technical standards regulating the use and disposal of sewage sludge. These regulations were signed on November 25, 1992, published in the Federal Register on February 19, 1993, and became effective on March 22, 1993. Domestic sludge which is land applied, disposed of in a surface disposal unit, or fired in a sewage sludge incinerator is subject to Part 503 technical and to State Env-Ws 800 standards. Part 503 regulations have a self-implementing provision, however, the CWA requires implementation through permits. Domestic sludge which is disposed of in municipal solid waste landfills is in compliance with Part 503 regulations provided the sludge meets the quality criteria of the landfill and the landfill meets the requirements of 40 CFR Part 258.

This draft permit has been conditioned to ensure that sewage sludge use and disposal practices meet the CWA Section 405(d) Technical Standards. In addition, EPA-New England has included with the draft permit a 72-page document entitled "EPA Region I NPDES Permit Sludge Compliance Guidance, November 1999" for use by the permittee in determining the appropriate

sludge conditions for the chosen method of sewage sludge use or disposal practices.

The permittee is required to submit an annual report to EPA-New England and the NHDES-WD, by February 19th each year, containing the information specified in the Sludge Compliance Guidance document for their chosen method of sewage sludge use or disposal practices.

The permittee identified the Turnkey Landfill in Rochester, NH, as the disposal site for approximately 538 dry metric tons (annually) of its sludge.

E. Monitoring and Other General Conditions

The effluent monitoring requirements have been established to yield data representative of the discharge under the authority of Section 308(a) of the CWA in accordance with 40 CFR 122.41(j), 122.44(i), and 122.48.

Other conditions of the permit which are not specifically discussed in this Fact Sheet are based on the NPDES regulations, 40 CFR Parts 122 through 125, and consist primarily of management requirements common to all permits.

VII. Essential Fish Habitat

Under the 1996 Amendments (PL 104-297) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Service (NOAA Fisheries) if EPA's actions, or proposed actions that EPA funds, permits, or undertakes, may adversely affect EFH. The Amendments broadly define essential fish habitat as, "... those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." 16 U.S.C. § 1802(10). Adverse effect means any impact which reduces the quality and/or quantity of EFH. 50 C.F.R. § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

EFH is only designated for species for which federal Fishery Management Plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations were approved for New England by the U.S. Department of Commerce on March 3, 1999.

As the federal agency charged with authorizing the discharge from this facility, EPA is in the process of consulting with NOAA Fisheries pursuant to section 305 (b)(2) of the Magnuson-Stevens Act. This consultation will be completed before the permit is finalized.

VIII. State Certification Requirements

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violate NH Standards or waives its right to certify as set forth in 40 CFR §124.53.

Upon public noticing of the draft permit, EPA is formally requesting that the State's certifying authority make a written determination concerning certification. The State will be deemed to have waived its right to certify unless certification is received within 60 days of receipt of this request.

The NHDES-WD is the certifying authority. EPA has discussed this draft permit with the Staff of the Wastewater Engineering Bureau and expects that the draft permit will be certified. Regulations governing state certification are set forth in 40 CFR §§ 124.53 and 124.55.

The State's certification should include the specific conditions necessary to assure compliance with applicable provisions of the Clean Water Act Sections 208(e), 301, 302, 303, 306 and 307 and with appropriate requirements of State law. In addition, the State should provide a statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law. Since the State's certification is provided prior to permit issuance, any failure by the State to provide this statement waives the State's right to certify or object to any less stringent condition. These less stringent conditions may be established by EPA during the permit issuance process based on information received following the public noticing. If the State believes that any conditions more stringent than those contained in the draft permit are necessary to meet the requirements of either the CWA or State law, the State should include such conditions and, in each case, cite the CWA or State law reference upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. The only exception to this is the sludge conditions/requirements implementing Section 405(d) of the CWA are not subject to the Section 401 State Certification requirements. Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through the applicable procedures of 40 CFR Part 124.

It should be noted that under CWA § 401, EPA's duty to defer to considerations of state law is intended to prevent EPA from relaxing any requirements, limitations or conditions imposed by state law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 CFR § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." Id. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR § 122.4 (d) and 40 CFR § 122.44(d).

IX. Comment Period, Hearing Requests, and Procedures for Final

Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to: Mr. Roger A. Janson, Director of Municipal Permits Branch, U.S. EPA, Office of Ecosystem Protection, Massachusetts State Program Unit, 1 Congress Street, Suite 1100, Mail Code CMP, Boston, Massachusetts 02114-2023.

EPA anticipates significant public interest in this action. Therefore, a public hearings will be held after at least thirty (30) days public notice. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period (after the public hearing), the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Permits may be appealed to the Environmental Appeals Board in the manner described at 40 CFR § 124.19.

X. EPA Contact

Additional information concerning the draft permit may be obtained between the hours of 9:00 A.M. and 5:00 P.M., Monday through Friday, excluding holidays from:

Mr. Damien Houlihan, Environmental Engineer
U.S. Environmental Protection Agency
Office of Ecosystem Protection
Mail Code CMA
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023
Telephone: (617) 918-1586
FAX No.: (617) 918-1505

_____
Date:

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

CHARACTERISTICS OUTFALL 001 - TREATED WASTEWATER

Data summarized from DMRs and Responses to CWA Section 308 letter
(January 2002 through April 2004)

Parameter	Monthly Average[1]	Maximum Daily	Maximum Monthly
Flow, (MGD)	5.0	20, 20, 20	8.3, 7.9, 6.4
BOD_5, (mg/l)[2]	106	N/A	144, 136, 134
BOD_5, (lb/day)[2]	4243	N/A	5296, 5108, 5009
BOD_5 Removal, (%)[2]	43	N/A	30, 31, 32[3]
TSS, (mg/l)	58	N/A	84, 73, 71
TSS, (lb/day)	2349	N/A	3824, 3740, 3443
TSS Removal (%)	64	N/A	43, 47, 51[3]
Total Coliform Bacteria (#/100 ml)	19[4]	1600, 1600, 1600	151, 105, 96[4]
Fecal Coliform Bacteria (#/100 ml)	2.5[4]	900, 170, 80	4, 4, 4[4]
Total Residual Chlorine (mg/l)	1.66	25, 20, 19	4.9, 4.6, 4.45
pH (Standard Units)	N/A	6.0, 6.1, 6.2[5] 7.9, 7.3, 7.2[6]	N/A

[1]Average of Average Monthly

[2]Data from December 2002 is not included in this calculation because the plant was not operating under normal circumstances due to bypass needed to complete construction

[3]Minimum % Removal

[4]Calculated as a Geometric Mean

[5]Minimum pH values

[6]Maximum pH values

ATTACHMENT A

PERMITTED OUTFALLS UNDER THE JURISDICTION OF THE CITY OF PORTSMOUTH

DISCHARGE SERIAL NO.	LOCATION	TYPE OF DISCHARGE	COMPOSITION OF DISCHARGE	RECEIVING WATER
001	43 04.24' N (Lattitude) 70 44.34" W (Longitude)	Treatment Plant	Treated Sanitary	Piscataqua River
010A	Parrot Avenue	Combined Overflow	Untreated Sanitary/Storm Water	South Mill Pond to Piscataqua River
010B	Parrot Avenue	Combined Overflow	Untreated Sanitary/Storm Water	South Mill Pond to Piscataqua River
012	Marcy Street	Combined Overflow	Untreated Sanitary/Storm Water	Piscataqua River
013	Deer Street	Combined Overflow	Untreated Sanitary/Storm Water	Piscataqua River